REMARKS

In light of the above amendatory matter and remarks to follow, reconsideration and allowance of this application are respectfully requested.

The specification is amended to refer to the computer-readable medium which may implement the flow chart of, for example, Fig. 2.

Claims 1, 4 and 7 are amended to emphasize features of the present invention that had been claimed but might not have been clear. The present amendment is intended to clarify that which had been previously claimed. Claims 2 and 5 are amended to be consistent with claims 1 and 4, respectively. Claims 16, 17 and 19, 20 are rewritten in independent form by adding the recitations previously recited therein into claims 15 and 18, respectively. Claim 21 is amended to conform to claim 18. Accordingly, claims 1, 2, 4, 5, 7, 15, 18 and 21 are presented for consideration.

Claims 1, 2, 4, 5 and 7 were rejected under 35 USC 103 in view of U.S Patent 6,944,229 (Son) in combination with U.S. Patent 7,246,249 (Shiiyama). Claims 15-21 were rejected as being obvious in view of Son alone. It is respectfully submitted, Applicant's claims 1, 2, 4, 5, 7, 15, 18 and 21 are patentably distinct over Son and Shiiyama, or over Son alone, for the reasons now discussed.

As previously discussed by Applicant's representative, Son describes MPEG decoding using dynamically varying voltage and frequency of a processor. The operation frequency and voltage of the processor is set depending on the estimated system workload during an interrupt unit (col. 3, lines 15-18 of Son). A "diff value" is an index showing how close the actual speed of the system is to the system speed for real-time decoding, and represents the difference between the number of actually processed frames

and the number of set frames (col. 4, lines 54-57). If the diff value is positive, the operation frequency and voltage of the processor are decreased, and if the diff value is negative, the operation frequency and voltage are increased (col. 4, lines 58-65). If the number of frames in an interval cannot be processed, frames are dropped (col. 5, lines 1-12). The drop rate determines the quality of service; and the quality of service is reduced if power consumption is important (col. 6, lines 12-25). However, Son does not suggest reducing the number of bits per pixel of the decoded motion picture data. Nor is Son concerned with the amount of energy remaining in a power source and whether the remaining energy is sufficient to complete the decoding and displaying of motion picture data.

The Examiner now relies on the newly cited reference to Shiiyama for a teaching of determining the amount of energy needed to reproduce data and detecting the remaining energy level of a battery.

Claim 1 recites,

> a decoding means for decoding the frames of image data of the encoded motion picture data at an adjustable number of bits per pixel of the decoded motion picture data;
>
> means for measuring the amount of energy that was consumed during a decoding time interval;
>
> means for estimating the amount of energy anticipated to decode and display remaining motion picture data as a function of the measured amount of energy that was consumed;
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> ***
>
> a controlling means for controlling the decoding means on the basis of a difference between said anticipated energy needed for decoding and displaying the motion picture data and the remaining energy of the electric power source to

> dynamically control the playing quality of the motion picture data by selectively reducing said number of bits per pixel.

These limitations are not suggested by the combination of Son and Shiiyama. Neither reference suggests reducing the number of bits per pixel if the remaining energy of the power source is not sufficient to decode and display the remaining frames of motion picture data. While Shiiyama detects the remaining power of a battery and determines whether the reproducible time represented by that remaining power is less than or greater than the time needed to complete a reproduction operation, Shiiyama does not measure the amount of energy that had been consumed, nor does Shiiyama estimate the amount of energy that is anticipated to decode and display "as a function of the measured amount of energy that was consumed," all as recited by claim 1.

The foregoing recitations are found in Applicant's claims 1, 2, 4, 5 and 7. Accordingly, Applicant's claimed invention, as defined by claims 1, 2, 4, 5 and 7, is unobvious over the combination of Son and Shiiyama. The withdrawal of the rejection of these claims is respectfully requested.

Claims 15-21 all recite the feature of:

> anticipating the time needed to display a predetermined number of frames on the basis of the number of frames that can be displayed during a unit time and for controlling the decoding means to dynamically control the number of bits per pixel of the decoded image data on the basis of said anticipated time.

Son does not suggest controlling the number of bits per pixel of the decoded image on the basis of the anticipated time needed to display a predetermined number of frames, as a function of the number of frames that can be displayed during a unit time. Accordingly, claims 15, 18 and 21 are patentably distinct over Son; and the withdrawal of the rejection of these claims is respectfully solicited.

Statements appearing above in respect to the disclosures in the cited references represent the present opinions of the undersigned attorney and, in the event the Examiner disagrees with any of such opinions, it is respectfully requested that the Examiner specifically indicate those portions of the references providing the basis for a contrary view.

Claims 1, 2, 4, 5, 7, 15, 18 and 21 are in condition for allowance. Early issuance of the Notice of Allowance of this application is respectfully solicited.

Please charge any additional fees that may be needed, and credit any overpayment, to our Deposit Account no. 50-0320.

Respectfully submitted,

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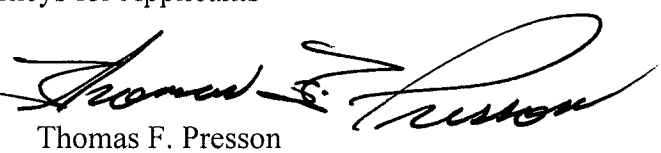
By: 

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